

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1-12. (canceled).

13. (currently amended): An isolated immunogenic, non-haemolytic *Actinobacillus pleuropneumoniae* (*App*) strain comprising at least one mutation in a transmembrane domain-encoding segment of the *apxIA* gene wherein the segment of the *apxIA* gene corresponds to nucleotides 886 to 945, nucleotides 697 to 759, or nucleotides 1105 to 1215 of SEQ ID NO. 1, and optionally with or without at least one mutation in a transmembrane domain-encoding segment of the *apxIIA* gene, wherein the transmembrane domain encoding segment in each *apxIA* gene and of the *apxIIA* gene corresponds either to nucleotides 886 to 945, to nucleotides 697 to 759, or to nucleotides 1105 to 1215 of SEQ ID NO. 2.

14. (previously presented): The strain of Claim 13, wherein said mutation is a deletion.

15. (previously presented): The strain of Claim 14, wherein said deletion is in a region of the *apxIA* gene which encodes a second transmembrane domain of the *App* ApxI exotoxin.

16. **(currently amended):** The strain of Claim 15, wherein said deletion is of nucleotides 886 to 945 of the *apxIA* geneSEQ ID NO. 1.

17. **(previously presented):** The strain of Claim 16, wherein, said strain additionally comprises a deletion in a region of the *apxIIA* gene which encodes a second transmembrane domain of the *App* ApxII exotoxin.

18. **(withdrawn-currently amended):** The strain of Claim 17, wherein said deletion is of nucleotides 886 to 945 of the *apxIIA* geneSEQ ID NO. 2.

19. **(previously presented):** A vaccine composition against porcine pleuropneumonia comprising an immunogenically effective amount of the *Actinobacillus pleuropneumoniae* strain of Claim 13, and a pharmaceutically acceptable carrier, wherein the porcine pleuropneumoniae is caused by *Actinobacillus pleuropneumoniae*.

20. **(withdrawn):** An immunogenic and non-haemolytic strain of *Actinobacillus pleuropneumonia* having the characteristics of that deposited in the Colección Española de Cultivos Tipo under registration number CECT 5985, or a mutant thereof.

21. **(withdrawn):** A vaccine composition against porcine pleuropneumoniae comprising an immunogenically effective amount of the *Actinobacillus pleuropneumoniae* of Claim 20; and a pharmaceutically acceptable carrier.

22. (withdrawn): An immunogenic and non-haemolytic strain of *Actinobacillus pleuropneumoniae* having the characteristics of that deposited in the Colección Española de Cultivos Tipo under registration number CECT 5994, or a mutant thereof.

23. (withdrawn): A vaccine composition against porcine pleuropneumonia comprising an immunogenically effective amount of the *Actinobacillus pleuropneumoniae* of Claim 22, and a pharmaceutically acceptable carrier.

24. (withdrawn-currently amended): A method for obtaining an immunogenic, non-haemolytic *Actinobacillus pleuropneumoniae* (*App*) strain comprising introducing at least one mutation in a transmembrane domain-encoding segment at least one region of the *apxIA* gene, wherein the segment of the *apxIA* gene corresponds to nucleotides 886 to 945, nucleotides 697 to 759, or nucleotides 1105 to 1215 of SEQ ID NO. 1, of said strain, and optionally with or without in at least one mutation in a transmembrane domain-encoding segment region of the *apxIIA* gene of said strain, wherein each region encodes a transmembrane domain of the *Apx* haemolytic and cytolytic exotoxins, and wherein the transmembrane domain encoding region in each *apxIA* gene andsegment of the *apxIIA* gene corresponds either to nucleotides 886 to 945, to nucleotides 697 to 759, or tonucleotides 1105 to 1215 of SEQ ID NO. 2.

25. (withdrawn): The method of Claim 24, wherein said mutation is a deletion.

26. (withdrawn): The method of Claim 25, wherein said deletion is in a region of the *apxIA* gene which encodes a second transmembrane domain of the *App ApxI* exotoxin.

27. (withdrawn-currently amended): The method of Claim 26, wherein said deletion is of nucleotides 886 to 945 of ~~the apxIIA gene~~SEQ ID NO. 1.

28. (withdrawn): The method of Claim 27, wherein said method additionally comprises introducing a deletion in a region of the *apxIIA* gene which encodes a second transmembrane domain of the *App* ApxII exotoxin.

29. (withdrawn-currently amended): The method of Claim 28, wherein said deletion is of nucleotides 886 to 945 of the ~~apxIIA gene~~SEQ ID NO. 2.